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09/726,699	11/29/2000	David Coupe	END920000091US1	1379
30400	7590	10/05/2004	EXAMINER	
HESLIN ROTHENBERG FARLEY & MESITI P.C.			STEVENS, ROBERTA A	
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2665

DATE MAILED: 10/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/726,699

Applicant(s)

COUPE ET AL.

Examiner

Roberta A Stevens

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 29 November 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-77 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3,5-13,15-22,24-26,28,30-38,40-47,50-53,55,57-63,65-74,76 and 77 is/are rejected.
- 7) ☒ Claim(s) 2,4,14,23,27,29,39,48,49,54,56,64 and 75 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 2,3.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_.

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claims 1, 3, 5, 8-12, 28, 30, 33-37, 51, 53, 55, 57 and 60-63, are rejected under 35 U.S.C. 102(e) as being anticipated by Pinder (U.S. 6219358).

2. Regarding claim 1, Pinder teaches (figs. 5 and 8) a method for re-mapping PID values provided in transport packets associated with multiple transport streams to be multiplexed onto a single shared transport channel, comprising: providing at least one PID re-map table (fig. 3, element (304) having re-map values indexed by n possible PID values of transport packets associated with at least one transport stream of the multiple transport streams, wherein n is less than all possible PID values of the transport packets within the multiple transport streams; and comparing PID values of transport packets associated with the transport stream with n possible PID values of the PID re-map table, and when the match is found, indexing the PID re-map table using the matching PID value, generating therefrom a re-map value, and replacing the matching PID value by the re-map value (cols. 7-8).

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3. Regarding claims 3, 28 and 55, Pinder teaches (fig. 5) the transport channel couples to a transport de-multiplexor that can handle  $x$  PID values where  $n \leq x$ .
4. Regarding claims 5, 30 and 57, Pinder teaches (fig. 1) receiving the multiple transport streams from multiple network interfaces, each to receive a separate network input.
5. Regarding claims 8, 33 and 60, Pinder teaches (fig. 3 and col. 7, lines 3-53) the multiple transport stream comprise two transport streams, and wherein the method comprises providing a separate PID re-map table for each transport stream, and comparing PID values of the transport packets associated with each transport stream with entries of the respective tables.
6. Regarding claim 9, 34 and 61, Pinder teaches (col. 6, lines 61-col. 7, line 2) each transport stream contains a real time clock reference.
7. Regarding claim 10, 35 and 62, Pinder teaches (fig. 3) navigational table indicative of the PID values in use by the transport streams, monitoring and adjusting the value  $n$  responsive to changes in the navigational tables.
8. Regarding claim 11, 36 and 63, Pinder teaches (fig. 3) synchronizing each stream to identify packet boundaries (start indicator and discontinuity indicator).
9. Regarding claim 12, 37 and 65 Pinder teaches (fig. 1) a live network interface.

10. Regarding claim 26, Pinder teaches (figs. 5 and 8) a system of re-mapping PID values provided in transport packets associated with multiple transport streams to be multiplexed onto a single shared transport channel, comprising: means for providing at least one PID re-map table (fig. 3, element 304) having re-map values indexed by n possible PID values of transport packets associated with at least one transport stream of the multiple transport streams, wherein n is less than all possible PID values of the transport packets within the multiple transport streams; and means for comparing PID values of transport packets associated with the transport stream with n possible PID values of the PID re-map table, and when the match is found, indexing the PID re-map table using the matching PID value, generating therefrom a re-map value, and replacing the matching PID value by the re-map value (cols. 7-8).

11. Regarding claim 51, Pinder teaches (figs. 5 and 8) a system for processing transport packets associated with multiple transport streams to be multiplexed onto a single transport demultiplexor, comprising: at least one PID re-map table (fig. 3, element 304) having re-map values indexed by n possible PID values of transport packets associated with at least one transport stream of the multiple transport streams, wherein n is less than all possible PID values of the transport packets within the multiple transport streams; and a controller that compares PID values of transport packets associated with the transport stream with n possible PID values of the PID re-map table, and when the match is found, indexing the PID re-map table using the matching PID value, generating therefrom a re-map value, and replacing the matching PID value by the re-map value (cols. 7-8).

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12. Regarding claim 53, Pinder teaches (figs. 5 and 8) at least one program storage device readable by a machine, tangibly embodying at least one program of instructions executable by the machine to perform a method for re-mapping PID values provided in transport packets associated with multiple transport streams to be multiplexed onto a single shared transport channel, comprising: providing at least one PID re-map table (fig. 3, element 304) having re-map values indexed by n possible PID values of transport packets associated with at least one transport stream of the multiple transport streams, wherein n is less than all possible PID values of the transport packets within the multiple transport streams; and comparing PID values of transport packets associated with the transport stream with n possible PID values of the PID re-map table, and when the match is found, indexing the PID re-map table using the matching PID value, generating therefrom a re-map value, and replacing the matching PID value by the re-map value (cols. 7-8).

***Claim Rejections - 35 USC § 103***

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any

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evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

15. Claims 6-7, 13, 15-22, 24, 25, 31-32, 38, 40-47, 50, 52, 58-59, 66-74, 76 and 77 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pinder in view of Robinett (U.S. 6351471 B1).

16. Regarding claims 6-7, 13, 31-32, 38, 58-59 and 66, Pinder teaches (fig. 5) the transport stream retrieved from a storage device associated with a de-multiplexor.

17. Pinder does not teach interleaved packets

18. Robinett teaches (col. 42, lines 39-59) interleaved data. It would have been obvious to one of ordinary skill in the art at the time the invention was made to adapt to Pinder's system Robinett's interleaving of data to increase quality of service within the system.

19. Regarding claim 15, Pinder teaches (figs. 5 and 8) a method for processing transport packets associated with multiple transport streams, comprising: re-mapping PID values, comprising: providing at least one PID re-map table (fig. 3, element (304) having re-map values indexed by n possible PID values of transport packets associated with at least one transport stream of the multiple transport streams, wherein n is less than all possible PID values of the transport packets within the multiple transport streams; and comparing PID values of

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transport packets associated with the transport stream with n possible PID values of the PID re-map table, and when the match is found, indexing the PID re-map table using the matching PID value, generating therefrom a re-map value, and replacing the matching PID value by the re-map value (cols. 7-8).

20. Pinder does not teach interleaved packets

21. Robinett teaches (col. 42, lines 39-59) interleaved data. It would have been obvious to one of ordinary skill in the art at the time the invention was made to adapt to Pinder's system Robinett's interleaving of data to increase quality of service within the system.

22. Regarding claims 16, 41 and 68, Pinder teaches (figs. 5) the transport stream for input into a de-multiplexor.

23. Regarding claims 17, 42 and 69, Robinett teaches (col. 42, lines 39-59) buffering prior to interleaving.

24. Regarding claims 18, 43 and 70, Pinder teaches (fig. 3) synchronizing each stream to identify packet boundaries (start indicator and discontinuity indicator).

25. Regarding claims 19, 20, 44-45 and 71-72, Pinder teaches (fig. 1) a live network interface and input.

26. Regarding claims 21, 46 and 73, Pinder teaches (fig. 5) a storage device (502).



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27. Regarding claims 22, 47 and 74, Pinder teaches (col. 5. lines 7-19) a set top box.

28. Regarding claims 24 and 76, Pinder teaches (fig. 5) the transport channel couples to a transport de-multiplexor that can handle  $x$  PID values where  $n \leq x$ .

29. Regarding claims 25, 50 and 77, Pinder teaches (fig. 3) navigational table indicative of the PID values in use by the transport streams, monitoring and adjusting the value  $n$  responsive to changes in the navigational tables.

30. Regarding claim 40, Pinder teaches (figs. 5 and 8) a system for processing transport packets associated with multiple transport streams, comprising: means for re-mapping PID values, comprising: means for providing at least one PID re-map table (fig. 3, element (304) having re-map values indexed by  $n$  possible PID values of transport packets associated with at least one transport stream of the multiple transport streams, wherein  $n$  is less than all possible PID values of the transport packets within the multiple transport streams; and means for comparing PID values of transport packets associated with the transport stream with  $n$  possible PID values of the PID re-map table, and when the match is found, indexing the PID re-map table using the matching PID value, generating therefrom a re-map value, and replacing the matching PID value by the re-map value (cols. 7-8).

31. Pinder does not teach means for interleaving packets

32. Robinett teaches (col. 42, lines 39-59) interleaved data. It would have been obvious to one of ordinary skill in the art at the time the invention was made to adapt to Pinder's system Robinett's interleaving of data to increase quality of service within the system.

33. Regarding claim 52, Pinder teaches (figs. 5 and 8) a system for processing transport packets associated with multiple transport streams, comprising: re-mapping PID values, comprising: providing at least one PID re-map table (fig. 3, element (304) having re-map values indexed by n possible PID values of transport packets associated with at least one transport stream of the multiple transport streams, wherein n is less than all possible PID values of the transport packets within the multiple transport streams; and a controller that compares PID values of transport packets associated with the transport stream with n possible PID values of the PID re-map table, and when the match is found, indexing the PID re-map table using the matching PID value, generating therefrom a re-map value, and replacing the matching PID value by the re-map value (cols. 7-8).

34. Pinder does not teach interleaved packets

35. Robinett teaches (col. 42, lines 39-59) interleaved data. It would have been obvious to one of ordinary skill in the art at the time the invention was made to adapt to Pinder's system Robinett's interleaving of data to increase quality of service within the system.

36. Regarding claim 67, Pinder teaches (figs. 5 and 8) at least one program storage device readable by a machine, tangibly embodying at least one program of instructions executable by the machine to perform a method for re-mapping PID values provided in transport packets associated with multiple transport streams to be multiplexed onto a single shared transport channel, comprising: providing at least one PID re-map table (fig. 3, element 304) having re-map values indexed by n possible PID values of transport packets associated with at least one transport stream of the multiple transport streams, wherein n is less than all possible PID values

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of the transport packets within the multiple transport streams; and comparing PID values of transport packets associated with the transport stream with n possible PID values of the PID re-map table, and when the match is found, indexing the PID re-map table using the matching PID value, generating therefrom a re-map value, and replacing the matching PID value by the re-map value (cols. 7-8).

37. Pinder does not teach interleaved packets

38. Robinett teaches (col. 42, lines 39-59) interleaved data. It would have been obvious to one of ordinary skill in the art at the time the invention was made to adapt to Pinder's system Robinett's interleaving of data to increase quality of service within the system.

***Allowable Subject Matter***

39. Claims 2, 4, 14, 23 27, 29, 39, 48, 49, 54, 56, 64 and 75 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

1. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Roberta A Stevens whose telephone number is 571-272-3161. The examiner can normally be reached on M-F 9:00am-5:30pm.
2. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on 571-272-3155. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.
3. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Roberta A Stevens  
Examiner  
Art Unit 2665



STEVEN NGUYEN  
PRIMARY EXAMINER